Consumer's Guide to Missouri Agricultural Products

Missouri Department of Agriculture

CONSUMER'S GUIDE
TO
MISSOURI AGRICULTURAL PRODUCTS

Joseph P. Teasdale, Governor

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Missouri Department of Agriculture

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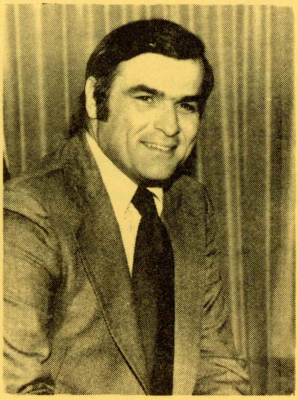


EXECUTIVE OFFICE
STATE OF MISSOURI
JEFFERSON CITY

JOSEPH P. TEASDALE
GOVERNOR

Fellow Missourians:

We can all take pride in the diversity and richness of Missouri's agriculture. Few other states have such a variety as Missouri -- from the popcorn, rice and cotton grown in the Bootheel, to the feed grains and livestock produced in the north.

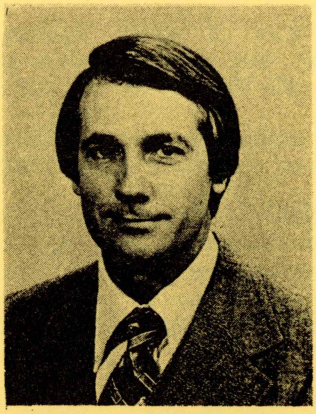
In addition to providing thousands of jobs and generating billions of dollars in revenue, Missouri's number one industry provides for the health and well-being of people all over the world who buy and use our wholesome products.

I salute the Missourians who take part in the production and marketing of our many agricultural goods. It is my hope that we will never take for granted the importance of this segment to our great state's commerce.

Sincerely,

Joseph P. Teasdale

GOVERNOR



DEPARTMENT OF AGRICULTURE
STATE OF MISSOURI
JEFFERSON CITY 65101

JACK RUNYAN
DIRECTOR

Dear Consumer:

One of the most important jobs of Missouri Department of Agriculture employees is to assure the wholesomeness of food products raised and distributed in the state.

Just as important is the role the Department plays in consumer education and product information.

This publication illustrates both functions. It attempts to show how consumers benefit daily from the Department's administration of state laws and regulations. In addition, the recipes, consumer tips and history on Missouri commodities clearly point out the importance of our farmers' effor produce a rich variety of foodstuffs for the benefit of all Missourians.

Jack Runyan
DIRECTOR

MISSOURI'S RANK NATIONALLY

ITEM	RANK
Black Walnuts	First
All farms, number	Second
Beef cows, number on farms	Second
Soybean production	Third
Market hogs, number on farms	Third
Soybean exports	Fifth
Turkeys raised, number	Fifth
White corn, production	Sixth
Meat exports	Sixth
Rice, production	Sixth
American cheese, production	Seventh
Ice milk, production	Seventh
Pecans	Seventh
Corn for grain, production	Eighth
Popcorn, production	Eighth
Winter wheat, production	Ninth
Whole milk used in manufactured dairy products	Ninth
Milk production	Tenth
Creamed cottage cheese, production	Tenth
Total cheese, production, excluding cottage cheese	Tenth

Serving Missouri Consumers

Though few consumers realize it, each time they purchase an agricultural product at a local grocery store or other retail outlet, they are protected in some way by the Missouri Department of Agriculture.

A variety of surveillance and inspection programs carried out by MDA assure the consumer gets a wholesome product at a fair price.

DAIRY PRODUCTS---Processors, haulers and distributors of Missouri dairy products are checked regularly by MDA inspectors to see that they follow specific sanitation requirements. State law outlines the requirements for the processing of such products, and the Missouri Unfair Milk Sales Act prohibits unfair competitive pricing at the wholesale and retail levels.

POULTRY AND EGGS---The Missouri Department of Agriculture licenses processors, dealers and retailers of eggs and carries out inspections to check size, quality and cleanliness of the products and the facilities where they are processed and distributed. An egg surveillance program conducted with the cooperation of the U. S. Department of Agriculture assures the consumer of a clean, quality product that is correctly labeled as to grade and size.

From the time eggs are graded until they are sold, they must be maintained at a temperature below 60 degrees. Consumers noting violations of this law may contact the Missouri Department of Agriculture.

MEAT PRODUCTS---The animal health division of MDA monitors the spread of diseases in Missouri livestock and administers eradication programs. Laboratory personnel handle hundreds of blood samples daily and conduct tests to determine the presence of diseases which could affect the quality of meat.

FRESH FRUITS AND VEGETABLES--MDA inspectors provide shipping point inspections at the producer level to check quality and grade on fresh fruits and vegetables being packed for transport. Receiving point inspections are also made to determine whether distributors and brokers are receiving the quality and grade guaranteed by the producer.

COMMERCIAL FEEDS, SEEDS, NURSERY STOCK--Purchasers of commercial feeds, seeds, and nursery stock in Missouri are protected by state laws which provide for inspections and analyses of these products. Any manufacturer of feed or seed who distributes products in the state must register with MDA. Inspectors take samples of the products and send them to a laboratory for content analysis. Any discrepancies in the package labels result in a stop sale order on the lot.

Purchasers of nursery stock can be assured of healthy plants by regular inspections for diseases carried out by Plant Industries inspectors from MDA.

ACCURATE WEIGHTS AND MEASURES---Missouri consumers have a friend in the Weights and Measures division. Inspectors from the division regularly check scales in supermarkets, wholesale houses, livestock markets, and even quarries and mines. Consumers, wholesalers and retailers all benefit from the accuracy checks on scales.

MDA inspectors also routinely check all types of packages sold in retail outlets for accurate weight labels. In addition, taxi-cab odometers, gasoline pumps, and fabric measuring devices fall under the jurisdiction of the Weights and Measures division.

Answers:

1. Dairy Products
2 Wine and Grapes
3. Chicken
4. Soybeans
5. Fish
6. Beef
7. Honey
8. Apples
9. Turkey
10. Black Walnuts
11. Lamb
12. Rice
13. Eggs
14. Peaches
15. Pecans
16. Pork
17. Corn or Popcorn
18. Wheat
19. Cotton

Name these Missouri Commodities:

Apples

Apple trees have a lot of roots in Missouri.

Red Delicious and Golden Delicious apples were introduced on the commercial market in 1895 and 1915, respectively, by Stark Brothers Nurseries, Louisiana, Missouri.

Missouri orchardists produce 50 to 60 million pounds of apples annually, half of which are Red or Golden Delicious. Jonathans, Winesaps and miscellaneous fall and winter varieties make up the remaining half.

Missouri apples are picked by hand. They are washed and graded and most are coated with a clear, edible wax. Ninety per cent of the state's apple crop is sold fresh. The rest becomes juice, cider vinegar, baby food or applesauce.

The first fresh apples come to market in late August. Most are harvested by mid-October, but some varieties come in fresh throughout winter. Thanks to controlled atmosphere storage, which stops the aging process, apples are available year round.

Jonathan apples are bright red and smooth around the blossom. A mildly tart, crisp and juicy variety, Jonathans cook quickly and retain their color and shape, making them ideal for baking and for pies.

Red Delicious apples are deep red, mild flavored and easily recognized by five points on the blossom end. They are somewhat dry and hard for baking but excellent for salads and fresh eating.

Sweet, crisp and milk flavored, Golden Delicious apples are perfect for pie and for eating fresh, but too firm for baking. They are ideal for salads, because when cut, they stay white longer than the red variety.

Apple flavor is best when the fruit is mature, or when its background or ground color is yellow to green yellow. Green ground color indicates underripe fruit; it will ripen at room temperature. Overripe fruit bears a dull yellow background and has soft, mealy flesh.

Store apples in the refrigerator, preferably in a plastic bag to retain moisture and prevent odor absorption.

Sprinkle apple slices with lemon or other citrus juice to prevent browning.

For pink applesauce, cook red apples with skins intact and then sieve to remove.

One medium apple supplies only 70 calories, offering traces of every essential nutrient. Most vitamins and minerals lie just below the skin, so don't peel it off! That's where the fiber is, too.

APPLE LEATHER

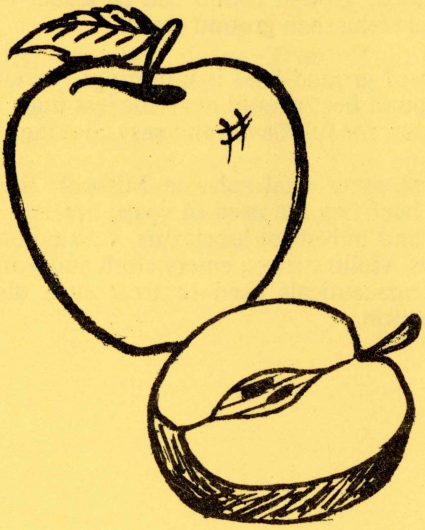
Wash and core several apples (Jonathans work best), leaving skins intact. Chop apples into small pieces.

Place chunks in small saucepan with just enough water to cover bottom. Sprinkle apples with cinnamon. Heat thoroughly until apples soften. (In microwave, sprinkle lightly with water; and heat 4 to 5 minutes on full power.) Puree softened apples in blender, one cup at a time.

Line cookie sheets or shallow baking pans with plastic wrap. With spatula, spread apple puree over plastic. Puree should be spread fairly thin, but not so thin that pan shows through on bottom.

Place pans in a sunny kitchen window or back window of a car to dry. Drying will take several hours, possibly a full day in the sunshine. When leather is done, it will peel easily from the plastic.

Roll finished leather in plastic wrap and store in tightly covered container. Leather will keep at room temperature for one month; in refrigerator for six months; in freezer up to one year.



Beef

One might say Missouri is big on beef.

This state is the nation's second largest producer of beef cows (behind only Texas). And the "average" Missourian eats nearly 100 pounds of beef every year.

A smart group, considering 3½ ounces of cooked lean beef supplies more than half the daily adult requirement for protein with only 200 calories. Beef is an excellent source of iron and all B-vitamins, elements essential for proper nerve function.

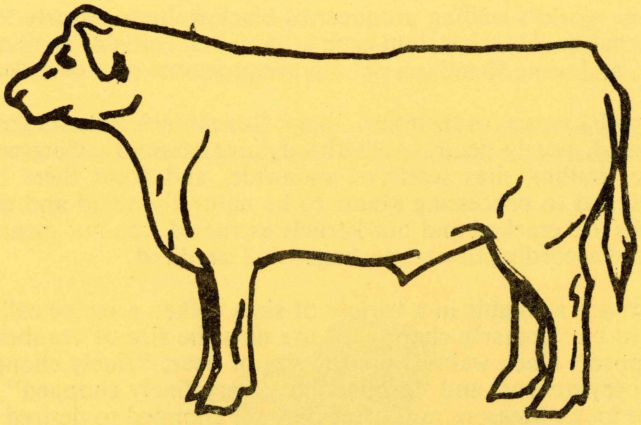
Variety is another valuable feature of beef, sold as steaks, roasts, ribs or cubes from seven basic retail groups. Rib cuts, loin cuts, and sirloin cuts come from little used muscles and, therefore, are most tender. They can be cooked by dry heat methods: broiled, grilled, panbroiled, or panfried. Meat cut from the chuck (blade or arm cuts), round, and breast (brisket and plate) are less tender, but more economical. These cuts should be marinated, braised or cooked in liquid for maximum tenderness.

Marbling, flecks of fat through the muscle, enhances meat flavor and juiciness and contributes to the tenderness of cooked beef.

Ground beef is tenderized by the grinding process, so the meat source is of little importance in determining tenderness. However, when no additional fat is added, ground round will be leaner than ground sirloin; ground sirloin is more lean than ground chuck.

Lean to fat ratio of ground beef is important, because more fat means less meat yield. Ground beef should never be less than 70% lean; but 10% to 15% fat is necessary for full flavor and easy cooking.

Beef plays several other vital roles in Missouri life . . . through by-products. Inedible beef fats are used in soap, lipstick, animal food, hand lotions, explosives and industrial lubricants. Cattle bones are components of paper, piano keys, violin strings, emery cloth and wallpaper. Many cattle glands supply pharmaceuticals used to treat such disorders as anemia, psoriasis and indigestion.



BEEF JERKY

1 beef flank steak or brisket
soy sauce
garlic salt, seasoned salt, whatever preferred
pepper

Freeze steak partially for easy slicing. Trim off all visible fat. Using a sharp knife, cut the flank steak, with the grain, into strips approximately 1/8 inch wide and the length of the steak. Dip strips into soy sauce, and place them flat and close together on a wire rack, or racks. Place over a shallow pan. Sprinkle lightly with seasonings. Turn and sprinkle the other side. "Bake" in a very slow oven, 60 degrees to 65 degrees C (140 degrees to 150 degrees F) for 8 to 10 hours or until dried and chewy. It should dry out - not cook. Store in a tightly covered container.

Black Walnuts

Missouri is the world's leading producer of black walnuts. Nearly 50 per cent of the international black walnut crop is harvested here during October and November, and some 30 million pounds are processed here each year.

Particularly well known for their rich, tangy flavor black walnuts grow in deep, well drained, nearly neutral soils throughout Missouri. Commercial processors have hulling sites scattered statewide, and from there black walnuts are shipped to processing plants to be naturally cured and dried. Once their shells are cracked and nut kernels extracted, the nut meats are inspected, graded according to size, packaged and sterilized.

Black walnuts are available in a variety of sizes. When a recipe calls for black walnuts to be "coarsely chopped," use nuts the size of cranberries. "Medium chopped" black walnuts are the size of peas; "finely chopped" nuts resemble peppercorns; and "ground" or "very finely chopped" nuts look like coarse meal. Measure nuts after they are chopped to desired size. One pound of black walnut meats yields about two cups of kernels.

Black walnuts are popular baking ingredients, because their distinct flavor is retained throughout cooking. They are not to be confused with English walnuts, milder flavored nuts whose shells and meats are golden brown.

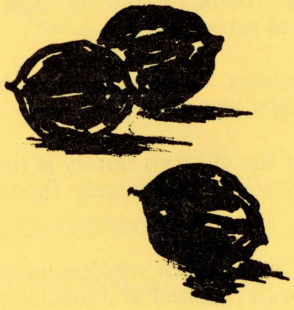
One cup of black walnuts supplies more than two thirds the adult daily protein requirement. Black walnuts are a good source of iron, vitamin A and several B vitamins. They contribute fiber to the diet, thus promoting good digestion.

Nut meats are not the sole end product of the black walnut. Black walnut shells are used every day by nearly everyone. The auto industry relies on a soft abrasive grit from black walnut shells to polish chrome and grind auto gears. Oil companies depend on shells when deep-well drills hit fractures in the earth. The space is immediately filled with black walnut shells to equalize pressure. Black walnut shells are important ingredients in glue, paint, cleaning agents for furs and dentures and jewelry polish. Black walnut shell grit is used to clean jet engines, precision instruments whose metal can't be pitted but must be thoroughly cleaned.

BLACK WALNUT FUDGE

one 12-ounce package semi-sweet chocolate pieces
1 can sweetened condensed milk
1 teaspoon vanilla
1 cup black walnuts, chopped

Melt chocolate in double boiler. Add milk, nuts, vanilla and cook five minutes. Pour into buttered dish, and chill until firm enough to cut.



Chicken

Chicken is a Missouri favorite, a culinary tradition. Chicken meat consumption has more than doubled here in 25 years.

The "average" Missourian eats about 43 pounds of chicken in various forms each year. About 90% of the 24 million broilers raised annually here are sold fresh or processed. The rest are distributed frozen or fully cooked, to be eaten fried or barbecued in fast-food restaurants or supermarket delis.

A broiler, sometimes labeled "broiler-fryer," is a young chicken, usually less than 13 weeks old. Broiler meat is very tender, ideal for frying, broiling or roasting.

Mature birds, called hens, fowls, or stewing chickens, are less tender and best suited to stews, salads or soups.

Capons are castrated roosters. They are tender, have lots of white meat and usually weigh four to eight pounds.

The youngest member of the chicken family is the Rock Cornish Hen, a one to two pound bird with light, delicately flavored meat, usually sold frozen.

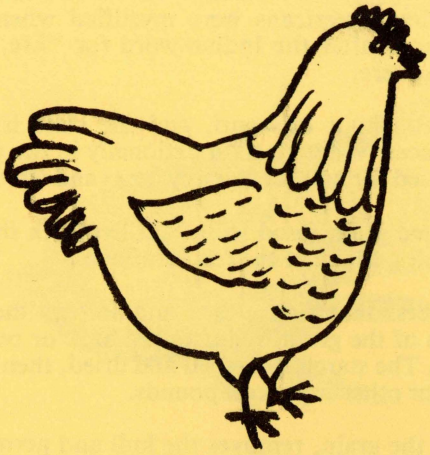
All chicken is federally inspected for wholesomeness and may be graded. Grade A birds are meaty, well finished and attractive. Birds graded B may be slightly lacking in meatiness or have a skin flaw; but they are more economical. A "B" bird is seldom grade labeled.

Fresh, tray packed chicken will keep two days in the refrigerator, four to six months in the freezer. Commercially frozen chicken keeps up to 12 months in a home freezer. Keep cooked chicken no longer than six months in the freezer.

Chicken is naturally low in fat. Three ounces of breast without skin contains only 115 calories, 185 calories with skin. Dark meat supplies slightly more calories.

A good source of high quality protein, chicken also offers iron, B-vitamins and phosphorus in large amounts.

Cooked chicken is done when the meat is fork-tender, or when a fork can be inserted easily. Juices will run clear with no trace of pink.



LEMON-HONEY CHICKEN

1 broiler-fryer chicken, cut in serving pieces
1 tablespoon oil
¼ cup honey
½ cup lemon juice
2 tablespoons soy sauce
1 teaspoon lemon peel, grated
1 teaspoon paprika
¼ teaspoon nutmeg

Arrange chicken in baking pan. To make sauce, stir together oil, honey, lemon juice, soy sauce, lemon peel, paprika and nutmeg. Pour sauce over chicken, turning pieces to coat. Bake uncovered in 180 degrees C (350 degrees F) oven for 1 hour, or until done, turning and basting once. Serves four.

Corn

It's no wonder the first Americans were mystified when the Indians brought them corn. Named after the Indian word for "life," corn grows only in the western hemisphere.

Corn is produced throughout Missouri, and the state is the nation's eighth largest corn producer. We rank sixth nationally in the production of white corn, most often used for making hominy, grits and white cornmeal.

Most corn becomes feed grain, used to sustain livestock that eventually becomes meat on our tables. Much of the rest is refined.

A "wet milling" process that first cleans and softens the corn kernel draws oil from the germ of the grain, removes the hull, or outer covering, and separates the starch. The starch is washed and dried, then used as is, or converted to corn syrup or other sugar compounds.

"Dry milling" cleans the grain, removes the hull and germ, then grinds the corn into various particle sizes. Hominy is merely corn with its hull and germ removed. Grits, often served as hot cereal, are finely ground hominy. Cornmeal and corn flour result from further grinding of the grain.

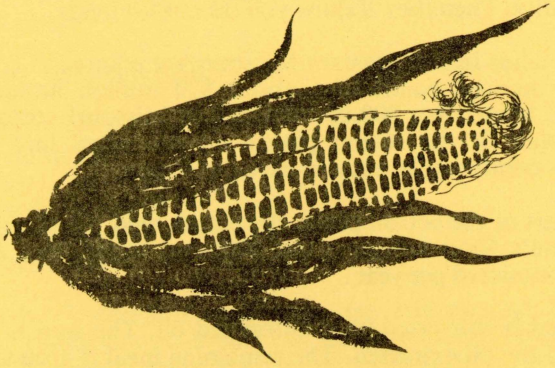
Regular cornmeal has a dry, granular texture and keeps best when stored tightly covered in a dry, cool place. Stone ground meal has a smooth texture and, some insist, true corn flavor. Because the germ of the grain and, therefore, the oil remains when corn is stone ground, this type of meal should be refrigerated to prevent rancidity.

Corn oil is odorless and flavorless and, therefore, a good choice for use in salads and for cooking. Its high smoke point makes it particulary well suited to deep fat frying and fondue cookery. Corn oil also is used in the manufacture of such items as soap, varnish and insecticides.

Besides use in fireworks, film and aspirin, cornstarch is used as a thickener in many commercial food products and in home food preparation. Cornstarch produces a more translucent appearance in glazes, sauces and gravies than does flour. Use only one tablespoon cornstarch when substituting for two tablespoons of flour. To prevent lumps, mix cornstarch with a little cold liquid or with sugar before adding to a hot mixture. Add any acidic liquid (wine, lemon juice, vinegar) after cornstarch is completely cooked and removed from heat.

Corn syrup creates smooth, creamy candy and crunchy, non-sticky brittles, because it does not crystallize as easily as granulated sugar. Nor is it as sweet. Dark corn syrup has a stronger flavor than the light variety. Corn syrup is also a commmon ingredient in parchment paper, shoe polish and tobacco products.

About 9 million pounds (on-ear weight) of sweet corn are grown in Missouri each year and used primarily for fresh sales at local stands and in supermarkets. Sweet corn kernels, used by the canning industry, contain more sugar and are softer than those of corn used for grain.



OLD FASHIONED SCRAPPLE

2 tablespoons bacon drippings
⅓ cup chopped onion
⅓ cup chopped celery
1 ½ cups cold water
1 cup cornmeal
1 teaspoon salt
¼ teaspoon pepper
3 cups boiling water
one-half pound bacon, cooked and crumbled

In large saucepan over medium heat, saute chopped onion and celery in bacon drippings until onion is transparent but not brown (about 5 to 8 minutes). Meanwhile combine cold water, cornmeal, salt, pepper and garlic powder.

Add boiling water to vegetable mixture; bring to boil again. Slowly pour cornmeal mixture into boiling water and vegetables, stirring constantly. Bring to boil; cover; continue cooking over low heat 5 minutes, stirring occasionally. Add cooked bacon; mix well. Pour into an 8½ x 4½ x 2 5/8-inch loaf pan which has been rinsed in cold water. Cool scrapple slightly; cover and chill several hours or overnight.

Carefully run a metal spatula along edges of pan to loosen scrapple. Remove scrapple from pan and cut into 12 slices. Fry slices on lightly greased griddle or in fry pan until golden brown. Serve warm with maple syrup, if desired.

Cotton

On a visit to Missouri's Bootheel, they'll serve you cheese grits, hush puppies and Southern fried chicken with a friendly drawl that echoes true southern hospitality. Then they'll show you the cotton fields.

Some 270,000 acres in southeastern Missouri are planted in cotton every year, and their harvest contributes about $70 million annually to the state's economy. More than 200,000 pounds of Missouri cotton lint (the soft, white portion of the cotton plant) are converted into America's favorite fiber ---- comfortable, easy-to-care-for cotton.

Yet another part of the cotton plant, the cotton seed, plays an important role in the nation's food industry; and Missouri contributes an average 80,000 tons of cottonseed per year.

Most cottonseed is converted into cottonseed oil. The seed is de-hulled, then crushed and the oil extracted. The remaining meal is ground and used in amimal feed.

Once refined, cottonseed oil has no distinguishable flavor; so it adapts well to use in a variety of products. The commercial food industry uses cottonseed oil in the manufacture of peanut butter, potato chips, margarine, mayonnaise and salad dressings. It often is used as a preservative in canning fish.

A stable oil with a high smoke point, cottonseed oil is ideal for home cooking. It most often is blended with other vegetable oils and packaged as the familiar vegetable oil and shortening products we buy for home use.

Because it is perfectly suited to Oriental cooking methods, cottonseed oil is in great demand in the Far East; and a large volume is exported there from the U.S.

Most commercially grown cottonseed contains glands which produce gossypol, a substance that is fatal when ingested. Gossypol is removed before cottonseed is processed into oil. Japanese scientists are experimenting with gossypol for possible use as a male contraceptive.

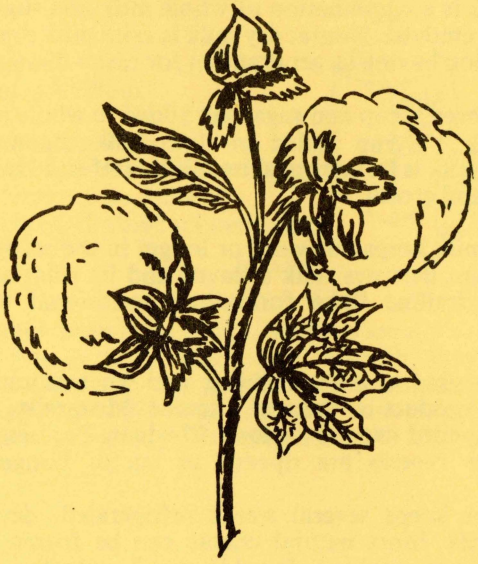
Several new strains of cotton without glands have been developed recently for use in food products other than oil. Some specialty stores offer cottonseed candy items to their customers. In clusters, coated with white chocolate, these items command a premium price.

High in protein, cracked cottonseed may one day compete with cracked wheat on health food product shelves.

MISSOURI GARDEN SALAD BOWL

1 16 oz. can green beans, drained
1 ½ cups fresh or frozen kernel corn
1 ½ cups fresh or frozen peas
1 16 oz. can kidney beans or other beans, drained
1 cup diced celery
1 green pepper, sliced
1 large onion, sliced in rings
salt to taste
dash pepper
⅔ cup vegetable oil
½ cup honey
¼ teaspoon dry mustard
⅔ cup red wine vinegar
Cheddar cheese cubes

In large bowl, combine vegetables, salt and pepper. Place oil, honey, mustard and wine vinegar in jar, and shake to blend. Pour over vegetables. Cover and refrigerate overnight. Sprinkle cheese cubes over top of salad to serve.



Dairy Products

It was a big, luscious dip of Missouri ice cream on a rolled-up waffle that created the world's first ice cream cone. St. Louis World's Fair vendors served the first cone in 1904, when fairgoers became impatient after the ice cream man ran out of bowls.

Dairy products remain an important part of Missouri life. This state is the nation's sixth largest producer of ice milk; and it ranks seventh in the production of American cheese and tenth in milk production.

No matter what shape or form they finally take, all dairy products come from milk, nature's most perfect food that contains not only the highest quality protein but at least a trace of every known nutrient. Milk is an excellent source of phosphorus, riboflavin and vitamin A. Its greatest dietary contribution, however, is calcium, vital for proper muscle coordination and nerve impulse transmission, along with healthy bone and tooth development.

Fluid whole milk must be 3.5% milkfat and 8.25% nonfat milk solids. Skim milk is whole milk with milkfat removed. Lowfat milk contains 0.5% to 2% fat.

Whole milk with 60% of its water removed is evaporated milk. Sweetened condensed milk is a combination of whole milk and sugar, with more than half the water removed. Nonfat dry milk is skim milk dried to a powder, the "instant" version having larger granules for easier dissolving.

When a flavored syrup and sugar are added to whole milk, the product is "flavored milk." Syrup added to skim milk becomes "flavored milk drink." Buttermilk is fermented skim milk. Half and Half is equal amounts of whole milk and cream.

Fresh fluid milk keeps one week or longer in the refrigerator. Prolonged exposure to light destroys milk's flavor and its riboflavin. Freezing milk may cause crystalline flake formation; nutritional value, however, is unaffected.

Milk curd is used in cheesemaking; and when it undergoes no further processing the product is "natural" cheese. Mozarella, cream and cottage cheese are unripened natural cheeses. Cheddar, Parmesan, Muenster, Blue and Limburger cheeses are ripened or cured. Longer ripening creates sharper flavor.

Cured cheese keeps several weeks refrigerated, developing a sharper flavor as it ages. Most natural cheese can be frozen successfully in its unopened original package for 1½ to 2 months. A partially used, rewrapped package will keep six weeks frozen. Freeze cheese in one pound pieces or smaller. Thaw 24 hours before serving. Always use low heat when cooking with natural cheese. High temperatures cause stringing and separation.

Processed cheese, such as American, is pasteurized to prevent further ripening. An emulsifier makes this cheese easy to melt and to slice.

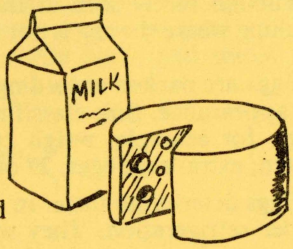
Processed cheese keeps well in the freezer for about four months. Follow the same guidelines as for freezing natural cheese.

Cottage cheese is the curd of skim or nonfat milk. One hundred pounds of milk make 15 pounds of cottage cheese. Cottage cheese separates when frozen, but it will keep fresh seven to ten days in the refrigerator. When a recipe calls for "sieved" cotttage cheese, five minutes under an electric mixer at high speed will make the cheese just as smooth.

To be labeled "ice cream," a frozen desert must contain at least 10% milkfat and not less than 20% total milk solids. Ice milk is made with less milkfat than ice cream, but it usually contains more sugar. Sherbet is a mixture of milk and/or cream, fruit juice and sweeteners.

Creamery butter, that made from cream, is available salted or unsalted. Because salt is a preservative, unsalted butter keeps its best flavor only one to two weeks, while salted butter lasts several weeks. Store butter covered in the coldest part of the refrigerator, not in the refrigerator door. Warmer temperatures cause flavor loss. Butter will keep one month frozen in its original package, six to nine months frozen in moisture proof freezer wrap.

SPRING GARDEN SOUP



6 tablespoons butter
1 small onion, chopped
6 tablespoons all-purpose flour
3 cups milk
2 cups chicken broth or bouillon
2 medium-sized carrots, thinly sliced
1 package (10 oz.) frozen peas, thawed
4 ounces fresh or frozen, drained spinach, diced
1 teaspoon salt
¼ teaspoon pepper

Melt butter in Dutch oven in large pot. Saute onion in butter until tender, about 5 minutes. Stir in flour. Cook until smooth, stirring constantly. Remove from heat. Gradually stir in milk and broth. Bring to boil over medium heat, stirring constantly. Boil and stir 1 minute. Add carrots, peas and spinach. Simmer uncovered, stirring occasionally, 15 minutes. Add salt and pepper.

Eggs

Marketing expert Mother Nature had a fresh idea when she wrapped perfect protein in a durable, attractive, biodegrable package that is easy to deliver. She's sold a lot of product. Six million Missouri hens lay 1.2 billion eggs every year. And the citizenry keeps demanding more.

This versatile, economical product, a meat equivalent, is an excellent source of complete protein. One egg supplies iron, phosphorus and traces of every known vitamin except C, yet contains only 80 calories. Sixty of those calories lie in the yolk, with half the protein and most of the nutrients.

Eggs do great things by themselves, including omelets, crepes, souffles, and quiches but they also leaven, thicken, emulsify and add color and flavor to other foods.

Always buy eggs from refrigerated cases, and read the carton. Grade identifies the interior quality of the egg, its shell condition and appearance. Grade AA or Fresh Fancy eggs cover a small area when broken from the shell: their whites are thick, yolks firm and high. Grade A eggs share the same qualities as those graded AA, but their whites are slightly thinner. Ideal for all purposes, these eggs are particularly good for frying or poaching where appearance is important.

Though rarely seen at the market, Grade B eggs are fine for general cooking where the egg is not visible.

Eggs are packed according to size; and size is determined by weight, not by appearance. Size classifications vary by three ounces. One dozen large eggs, for example, weigh 24 ounces. Medium eggs weigh 21 ounces per dozen; extra-large eggs, 27 ounces.

Eggs deteriorate faster in one day at room temperature than in one week under refrigeration. They will keep five to six weeks in the refrigerator. Store eggs large end up to keep the yolk centered.

The white filaments inside an egg are chalazae, whose sole purpose is to anchor the yolk.

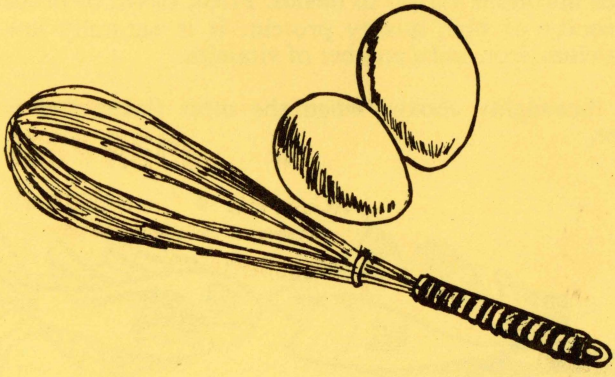
Shell color has no effect on egg quality, and brown eggs have the same nutritional value as the white versions.

QUICHE (keesh) LORRAINE
(elegant, but extra-easy)

one 9-inch pie shell
6 eggs, beaten
8 slices crispy bacon, crumbled
1 cup (4 ounces) grated Swiss cheese
1 ¼ cup half and half, light cream or milk
½ teaspoon salt
¼ teaspoon nutmeg
¼ teaspoon pepper

Brush inside of pie shell with some of beaten egg. Prick bottom and sides with fork. Bake 5 minutes at 220 degrees C (425 degrees F) if using frozen pie shell or metal pie pan; 230 degrees C (450 degrees F) if using glass pan. Set shell aside. Reduce oven to 180 degrees C (350 degrees F) for metal; to 190 degrees C(375 degrees F) for glass. Place bacon and cheese in pie shell. To beaten eggs, add remaining ingredients. Pour into pie shell. Bake 35 to 40 minutes or until knife inserted in center comes out clean. Let stand 5 to 10 minutes before serving.

Note: Quiche Lorraine is always bacon and Swiss cheese. But you can put anything you like in a quiche and call it what you want! Try mushrooms, onions, cooked potatoes, crumbled cooked beef or pork, bits of turkey, chicken, tuna, crab. Add chopped pimiento, green pepper, spinach, whatever you like, then sprinkle in your favorite herbs and spices. The possibilities are endless.



Fish

Nineteen thousand miles of river and 718,000 acres of lake make Missouri a fish lovers' haven. Each year some one million fishermen hook 25 to 50 million fish here - everything from catfish and carp to bass and trout.

Besides the several million goldfish produced here each year, Missouri fish are used strictly for recreational purposes, to stock lakes and streams.

Many fishing facilities import fish from other states, because Missouri producers can't meet the demand. Fresh fish in Missouri supermarkets usually is imported from one of the southern states.

Potential exists, however, for expanded production; and the Missouri Fish Farmers Association actively encourages the development of Missouri's 300,000 farm ponds into fish-producing waters. By managing such things as water temperature, depth, feeding, breeding and harvesting, ponds can produce large amounts of fish.

Once fish farming, or aquaculture, increases supply, Missouri grown fish will become available in local markets.

When selecting fresh fish at the market, look for bright, clear eyes. A fish with cloudy, sunken eyes and dull, loose skin is stale.

Use fresh fish within one to two days. It can be frozen successfully for three to six months. Thaw frozen fish in the refrigerator, allowing 24 hours for each pound. Fish may be thawed in a plastic bag under cold water; this method requires one to two hours per pound.

Fish adds nutritious variety to menus. Fried, baked or broiled, fish is an excellent source of high quality protein. It is naturally low in fat and supplies calcium, iron and a number of vitamins.

Fish is thoroughly cooked when the meat flakes and is opaque in appearance.

CRISPY CATFISH, MISSOURI STYLE

6 skinned, pan-dressed catfish or other fish, fresh or frozen
½ cup evaporated milk
1 tablespoon salt
dash pepper
1 cup flour
½ cup yellow cornmeal
2 teaspoons paprika
12 slices bacon

Thaw frozen fish. Clean, wash, and dry fish. Combine milk, salt and pepper. Combine flour, cornmeal and paprika. Dip fish in milk mixture and roll in flour mixture. Fry bacon in a heavy pan until crisp. Remove bacon, reserving fat for frying. Drain bacon on absorbent paper. Fry fish in hot fat for 4 minutes. Turn carefully and fry for 4 to 6 minutes longer or until fish is brown and flakes easily when tested with a fork. Drain on absorbent paper. Serve with bacon. Serves six.

Honey

"Ye freemen of the happy land,
Which flows with milk and honey,
Arise! to arms! your ponies mount,
Regard not blood or money...."

John L. Campbell

American revolution battle cry? Civil War encouragement? Nope. Those words express the fighting spirit of the Honey War, a not-so-major battle that determined Missouri's northern border.

Missouri and Iowa officials had disagreed over the state line for years. In 1839 when a Missouri man cut down three bee trees in the disputed area, Iowan tolerance disappeared; and the Honey War began.

Important in world history, honey was used in ancient Greece to pay taxes. King Arthur's mead was a fermented mixture of honey and fruit juices. Amor, Roman god of love, dipped his arrows in honey.

Modern man relies on skill and Mother Nature to produce the golden colored, natural sweetener in bulk. Some 556 worker bees travel nearly 35,000 miles to produce one pound of honey. Missouri beekeepers harvest about 6 million pounds annually.

Bees begin making honey when spring crops and flowers appear. Missouri bee yards are busiest from June through August. Production tapers off with cool weather.

Honey is very thick when it is gathered from the hive. At the processing plant it is melted to free flowing form, sterilized and filtered. It then is packed into jars and capped.

Pure honey needs no preservatives. It never spoils. It should be stored at room temperature, tightly covered to preserve flavor and aroma. Refrigeration only hastens crystallization. Honey crystallizes naturally. Taste and purity are not affected, however, and a jar of honey is easily returned to liquid form by warming it in a pan of water until crystals disappear.

Honey color is determined by floral source. Dark honey is full flavored. Lighter honey, preferred by most, has a milder flavor.

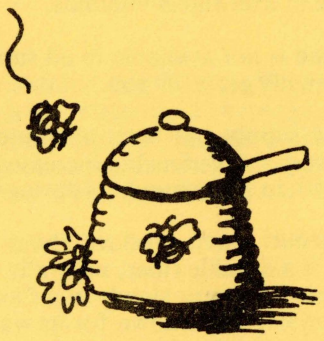
Because honey absorbs moisture, baked products made with honey resist drying and stay fresh longer. Two tablespoons of honey added to a cake or muffin mix creates a more tender, less crumbly product.

Honey may substitute for sugar in many recipes, cup for cup. Merely reduce liquid by one-fourth and baking temperatures by 15 degrees C (25 degrees F). Honey is viscous and heavy, so count on twelve ounces of honey to yield one cup. A three-pound jar of honey equals four cups.

SHOO—FLY PIE

2½ cups flour
1 teaspoon baking powder
¾ cup sugar
1 cup honey
dash salt
¾ cup butter
1 teaspoon soda
1¾ cups boiling water
2 unbaked 9-inch pie shells

Mix flour, baking powder, sugar and salt in large bowl. Cut in butter with pastry blender til crumbs are formed. Combine honey, water and soda in separate bowl, mixing well to blend. Pour ½ cup liquid into each pie shell and sprinkle with about ¾ cup crumb mixture. Continue to alternate, making about three layers of each. End with crumbs on top. Bake 40 to 45 minutes at 190 degrees C (375 degrees F). Tester knife will come out clean when pie is done. Serve hot or cold.



Lamb

Few foods can claim international distinction, but lamb is one such rarity. Far Eastern nomads first cooked it shish-kabob-style in the desert. Spaniards barbequed it. The Greeks glazed it with honey and offered it to their gods. Famous chefs throughout Europe and the United States serve it when the guests are extra special.

To be labeled "lamb," meat must come from sheep less than one year old. Most goes to market at about seven months. Lamb is not to be confused with mutton, the strong flavored, somewhat tough meat from older sheep.

The lean of high quality lamb will be firm, finely textured and reddish pink in color. Bones should be red and porous and appear moist. Lamb has practically no fat throughout the meat, but fat around the outside should be white and brittle.

Because lamb comes from very young animals, it is naturally tender. Slow cooking at low to moderate temperatures (150 degrees to 160 degrees C or 300 degrees to 325 degrees F), however, insures a juicy, flavorful product with even color and pleasant aroma.

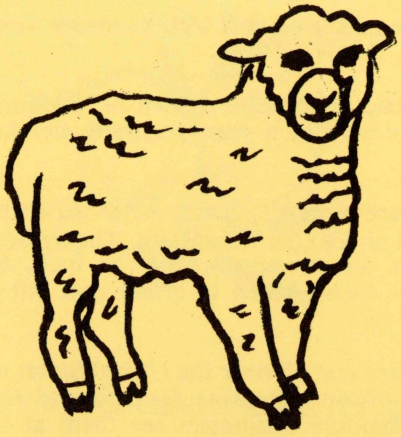
Contrary to common American notion, it is perfectly safe to eat lamb rare. Greek chefs consider lamb cooked to 65 degress C (150 degrees F) internal temperature ideal. Lamb should always be served either very hot or ice cold for best flavor.

Three ounces of lamb without fat contains only 160 calories, yet provides one third the daily adult requirement for protein. Lamb also is an excellent source of iron and B-vitamins.

Lamb is not available in all supermarkets; but if you ask, the meat man can usually get it for you.

Low supply has been attributed to small sheep population. Missouri, however, is experiencing increased interest in sheep production and expects a growth in sheep numbers during the next few years.

Missouri sheep produce about one million pounds of wool each year. Wool is a durable fiber, naturally wrinkle resistant, soil resistant and flame retardant. It burns slowly in a flame and extinguishes itself when removed. Particularly well known for its warming abilities, wool is a porous fiber. It allows air to circulate and, in certain weaves, can actually help keep the body cool.



BROILED LAMB SHISH KABOBS

1½ pounds boneless lamb shoulder OR
3½ pounds with bone-in
⅓ cup oil
¼ cup vinegar
½ cup catsup
½ teaspoon dry mustard
2 tablespoons Worcestershire sauce
2 tablespoons finely chopped onion
1 clove garlic, crushed

Cut meat in 1-inch cubes. Combine remaining ingredients. Pour over meat, and marinate several hours or overnight, refrigerated. Arrange meat on six greased skewers. Broil 2 inches from heat to desired degree of doneness (3 minutes each side for medium, 4 minutes for well done). Cook marinade and serve with kabobs. Serve on rice or noodles. Serves six.

Peaches

A good one will be a little bit soft with a creamy complexion, and it may blush. A good peach, that is.

There are 39 varieties of peaches grown in Missouri. About 20 million pounds are produced here each year, generally arriving on the market in July and August.

Missouri peaches are picked by hand. After harvesting they are washed, graded and placed in an ice cold water bath. The hydrocooler removes fuzz and dirt and lowers the temperature of the fruit, halting the ripening process. Peaches are then packed in crates and put in coolers to await shipment.

Missouri peaches are sent all over the United States and sometimes go as far as Canada and Mexico. Because Georgia and Carolina peaches are harvested earlier, Missouri consumers see them at the market in early summer.

To be assured of top quality peaches, look for a creamy, yellowish skin with no brown spots and no green coloring. Those with green will not ripen properly but will shrivel with age. Don't use "blush" as a quality indicator; some varieties don't turn red as they ripen.

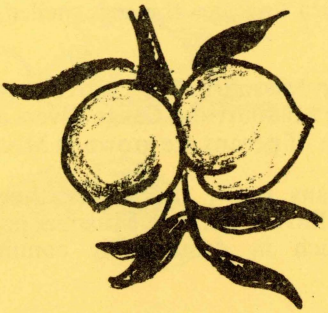
A ripe peach will be barely soft and may have a light, "peachy" aroma. Store soft peaches in the refrigerator; they will keep there for about one week. Soften firm peaches at room temperature, and move them to refrigeration once ripened.

Three to four medium size peaches will equal a pound. One pound yields approximately two cups slices or one cup of pulp. Count on one to one-and-one-half pounds fresh peaches for each pint home-canned or frozen.

When serving peaches, dip them in lemon or other citrus juice to prevent darkening. Ascorbic acid powder in recipes using peaches keeps the natural peach color bright but does not affect the flavor of the food.

Freestone peaches, whose flesh breaks away easily from the peach stone, are best for out-of-hand eating. Clingstone peaches are best suited to canning and cooking.

One medium size peach contains only 38 calories, yet supplies fair amounts of vitamins A and C, along with traces of many other essential nutrients.



SIMPLE SOUTHERN PEACH ICE CREAM

2 quarts fresh peach puree
juice of 2 lemons
1 teaspoon almond flavoring
1 pint whipping cream-not whipped
1 cup half and half cream
Sweeten to taste (approximately 2½ cups sugar)

Wash ripe peaches well; pit; peel if desired; and place chunks in blender or food processor. Puree peaches. Mix all ingredients, making sure sugar is dissolved. Pour into freezing can of ice cream freezer, and freeze according to manufacturer's instructions. Makes approximately one gallon.

Pecans

Indians in Missouri enjoyed pecans as a major food source long before white men explored America and saw the soft-shelled, brown nut for the first time.

Pecan trees are native to Missouri. They thrive in well drained bottom land, particularly along the Missouri and Osage Rivers and their tributaries. More than 2 million pounds of pecans are grown in Missouri every year.

The further north pecans grow, the higher their oil content and, therefore, the richer their flavor. Because Missouri pecans boast this rich taste, they are very much in demand by commercial bakers and confectioners.

Pecan trees growing wild produce nuts only every other year. By grafting and careful management of trees, however, pecan growers can reap pecan crops yearly. Harvesting usually begins late in October or in early November, after heavy wind or a killing frost has caused the nuts to drop.

Mechanical "shakers" that wrap around the tree trunk and vibrate the entire tree are sometimes used to remove nuts. Most growers use mechanical "harvesters" to gather fallen pecans.

Pecans processed commercially are washed in their shells and graded according to size. They then are cracked mechanically; pecan halves are separated from pecan pieces, and shells are removed. Vibrating tables sort halves according to size. Electric eyes examine nut meats, and any low quality pieces are removed. The pecans are packaged and put in cold storage to be disributed across the United States. (Pecan shells are used by nurseries as a decorative mulch for flower beds and around shrubbery.)

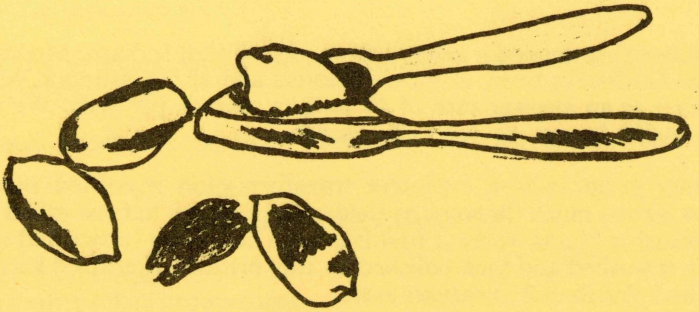
Popular additions to ice cream, candy and baked goods, pecans also are good snack fare. They are excellent sources of iron and B-vitamins and supply vitamin-A and calcium to the diet.

When buying pecans, select those lightest in color. Lighter color indicates higher oil content and, therefore, better flavor.

One pound in-shell pecans yields 2½ cups pecan halves or 2 cups chopped pecans. One pound shelled pecans yields 4½ cups halves, 3¾ cups chopped.

In-shell pecans keep several weeks at room temperature but require refrigeration for longer storage periods. Pecan pieces should be refrigerated in tightly sealed glass jars, where they will stay fresh six months.

Pecans may be frozen in plastic bags or tightly covered freezer containers. They will keep six to ten years at -18 degrees C (0 degrees F). After thawing, allow pecans to dry before using or refreezing.



HONEY SPARKLED PECANS

2 cups sugar
½ cup water
3 cups pecan pieces
2 teaspoons honey
2 teaspoons vanilla
¼ teaspoon rum flavoring

Boil sugar, water and honey to 110 degrees C (230 degrees F) or until mixture strings from a spoon. Add flavoring; cook to lukewarm. Beat until the mixture turns creamy. Add pecan pieces and stir until well coated. Spread on wax paper and cool. Makes 1 pound.

Popcorn

Columbus first noticed it around the necks of West Indians. Modern man sees it on Christmas trees, in movie theaters and at the ballpark. Missouri produces it at an average rate of 17 million pounds per year. We are the nation's eighth largest producer of popcorn.

The tiny grain, whose explosive transformation mystified many for centuries, grows much the same as field corn. Farmers harvest it and deliver it to processing plants where it first is graded according to size and quality. Popcorn is washed and then polished by tiny brushes. Sterilized kernels are bagged and distributed to various users.

Popcorn that consumers see on retail grocery shelves is the smallest size produced. Theaters use medium kernels. Large size popcorn is sent to snack food processors. Larger grade kernels are used by industry, because they are more durable and can better withstand the rigors of processing.

To pop properly, a popcorn kernel must be evenly heated on all sides. Oil serves as a heat distributor in the popping process, coating each kernel. For best results, use one third as much oil as popcorn kernels. Follow the manufacturer's instructions when using an electric popper.

Non-electric poppers, or pans on top of the stove, do not require the use of oil. But they demand constant attention. Agitation replaces oil as the heat distributor here, tumbling each kernel to heat it evenly. The pan must be shaken at all times, not only to avoid scorching but to insure good popped corn quality. Never shake an electric popper full of hot oil!

Popcorn should be stored in a tightly covered container to retain moisture and thus maintain popping quality. A sealed glass jar is ideal for storing popcorn. Refrigeration is unnecessary as long as the storage container is tightly sealed.

One cup of corn popped in oil contains only about 40 calories and is an excellent source of fiber. It also provides calcium, iron, niacin and traces of vitamin A and thiamine to the diet. One pint of popped corn contains three times as much phosphorus as a pint of milk.

The American Dental Association recommends popcorn on its list of approved snacks. Popcorn contains no sugar to damage tooth enamel, and chewing popped corn cleanses and gently massages the gums.

Popcorn is delicious popped plain, but it takes on a new twist when

buttered and sprinkled with onion salt, seasoned salt, Parmesan cheese, or any of your favorite herbs and spices. Try cinnamon and colored sugar crystals. Garnish soup with it.

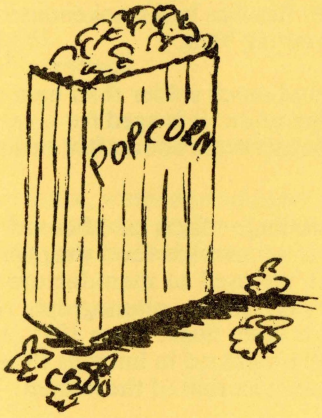
Corn for stringing should be popped a day or two in advance; fresh popcorn breaks easily.

Missouri popcorn is exported to Mexico, Canada, Europe and the Far East.

BAKED CARAMEL CORN

1 cup (2 sticks) butter
2 cups firmly packed brown sugar
½ cup light or dark corn syrup
1 teaspoon salt
½ teaspoon baking soda
1 teaspoon vanilla
6 quarts popped popcorn

Melt butter; stir in brown sugar, corn syrup and salt. Bring to boil, stirring constantly; boil without stirring 5 minutes. Remove from heat; stir in soda and vanilla. Gradually pour over popped corn, mixing well. Turn into two large, greased baking or roasting pans. Bake at 120 degrees C (250 degrees F) one hour, stirring every 15 minutes. Remove from oven; cool completely. Break apart and store in tightly covered container. Makes about 5 quarts Caramel Corn.



Pork

The first newspaper published west of the Mississippi, "The Missouri Gazette," in 1808 offered subscriptions payable in pork. Pork remains a valuable commodity in Missouri, the nation's fourth largest hog producer.

Pork is by no means a new product, but it has undergone some major characteristic changes in recent history. As a result of improved breeding techniques, the "new" pork has less fat, more protein and fewer calories than that of yesteryear.

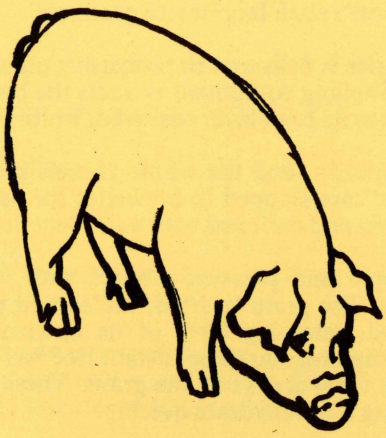
The Weight Watchers organization added pork to its list of approved foods in 1975. Most pork cuts contain about 250 calories per 3½-ounce serving, yet provide nearly two-thirds the daily adult protein requirement. Pork is an excellent source of iron and B-vitamins and contains three times more thiamine than any other food. Thiamine, difficult to obtain from other food sources, is vital for proper nerve and muscle function and for good digestion.

The once common practice of cooking pork at high temperatures to kill trichinae parasites has become (thank goodness!) old fashioned. At 60 degrees C (140 degrees F) cooked temperature, trichinae are destroyed. Years of testing have established that 75 degrees C (170 degrees F) cooked temperature yields the most desirable fresh pork product.

Probably the state's most well known pork is Missouri country cured ham. Before the advent of refrigeration, ham was cured out of necessity to preserve it. Many Missouri families had smokehouses and their own closely guarded secret recipes for curing ham.

Country ham is richer and much saltier than ham processed with regular cure, and it needs no refrigeration. It is aged for a year to 18 months, unlike conventional ham which is marketed soon after curing and smoking (about one week).

By-products are another major facet of Missouri's pork industry. Hog enzymes help comprise a treatment for food wrappers that retard spoilage. Bones from hog carcasses are used to manufacture glue, gelatin, buttons and bone china. Floor wax, chalk, phonograph records, linoleum and matches contain fatty acids from hogs. Since 1971, some 35,000 hog heart valves have been surgically implanted in humans to replace faulty originals. The swine heart closely resembles that of the human.



SIMPLE SWEET 'N' SOUR PORK

3 to 4 pork steaks, OR 1½ to 2 pounds pork shoulder
1 cup barbeque sauce
½ cup water
⅓ cup vinegar
1 green pepper, chopped
one 12-ounce jar fruit preserves
salt and pepper

Cut pork into bite-size pieces. Brown meat in large skillet. Salt and pepper to taste.

Combine barbeque sauce, water and vinegar. Pour over meat, cover, and simmer 45 minutes. Stir in green pepper and preserves. Cover, and simmer 15 more minutes. Serve over cooked rice.

Rice

Each year, some 50 million pounds of rice are harvested in Missouri, making this state the nation's sixth largest rice producer.

From Missouri fields, rice is delivered to processing plants where it first is dried and then cleaned. Shelling equipment extracts the hull, leaving brown rice. When this product has its bran layer removed, white rice remains.

Rice is graded mechanically, and the whole kernels are separated from broken pieces. "Brokens" are shipped to breweries for use in beermaking. Whole kernels are polished and enriched with a nutrient pre-mix.

Parboiled rice is cleaned and pressure steeped with its hull and bran intact to seal in vitamins. The grain is dried, hulled and polished to white rice. It then is parboiled, retaining 80% of its nutrients. This product requires longer cooking than regular rice. Instant rice has been cooked and either dried or frozen to form cracks in the grain. These cracks make the rice more porous, allowing it to rehydrate quickly.

One cup uncooked regular white rice yields 3 cups cooked. One cup uncooked, parboiled rice makes 3 to 4 cups. One cup uncooked, brown rice yields 3 to 4 cups, while one cup instant rice makes 1 to 2 cups.

Medium grain rice tends to cling together when cooked. It is ideal for croquettes, rice puddings, stuffings and meat loaves. Long grain rice is most popular as an accompaniment, because it is light and fluffy and separates easily.

To preserve nutrients, don't rinse rice before or after cooking.

Cooked rice may be stored in the refrigerator up to one week without loss of flavor or nutrients. Keep it covered to prevent drying or odor absorption.

Cooked rice may be frozen successfully by itself or with other foods for 6 to 8 months.

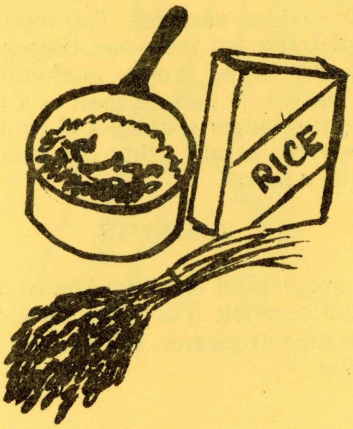
To reheat rice, add 2 tablespoons of liquid for each cup of rice, and place over low heat for 4 to 5 minutes.

AU GRATIN RICE

2 tablespoons butter
2 tablespoons flour
½ teaspoon salt
pepper
nutmeg
1 cup milk
1 cup grated Cheddar or American cheese
1 teaspoon butter
½ cup chopped onion
3 cups cooked rice

Melt butter in saucepan. Stir in flour and cook to boiling. Add spices and milk. Cook over low heat until sauce thickens, stirring constantly. Remove from heat and stir in grated cheese.

Saute onions in one teaspoon butter. Add onions and rice to sauce. Stir, and pour mixture into one quart baking dish. Top with additional grated cheese. Bake 30-35 minutes at 180 degrees C (350 degrees F).



Soybeans

Most everyone eats soybeans every day.

Everyone, that is, who eats crackers, donuts, soups, candy, pudding, salad dressing, baby food, pancake mix, cereal, spaghetti, diet foods, vegetable oil, margarine or cake mix, just to name a few. Most commercially prepared versions of these foods contain soy flour, soy oil, soy milk or soy meal, all variations of the soybean.

Soy products often are added to other foods as natural thickeners or stablilizers. They improve product appearance, increase shelf life, and retain moisture in some products. Soy substances enhance a food's nutritional value.

Unique to the plant kingdom because of their high quality protein, soybeans lack only one essential amino acid. One-half cup cooked soybeans contains about the same amount of protein as a two-ounce serving of meat. They also are an excellent source of iron, B-vitamins, phosphorus and vitamin A.

Soybeans are grown in Missouri at an annual rate of about 102 million bushels. Missouri is the nation's fourth largest producer and third largest exporter of soybeans.

There are two basic soybean varieties. The vegetable type with its mild, nutty flavor is most desirable for table use, because it cooks quickly. The field variety is a harder bean, grown predominantly for commercial processing into meal and oil. It may be used as a table vegetable, but the field bean usually requires longer soaking and cooking than the vegetable type. Prepare dry soybeans as any other dry bean--in soups, casseroles, salads, just plain or with a sauce.

SOY NUTS

Roasted soybeans make ideal snacks. Almost any vegetable or field variety is acceptable for roasting. The beans should be washed, soaked in water for 8-10 hours in the refrigerator, drained and spread to dry for about one hour before roasting.

Deep fat roasting: Place one cup of beans in frying basket, and cook 8-10 minutes in deep fat at 180 degrees C (350 degrees F) or until the beans are crisp and look like roasted peanuts. Plain or seasoned salt may be added when the beans are removed from the fat. Drained soybeans should be stored in airtight containers.

Oven Roasting: Beans for oven roasting should be soaked in salted water (1 teaspoon salt per quart of water). Roast in oven at 230 degrees C (450 degrees F) for 20 minutes or until brown. Stir frequently during the roasting process.

Yield: 1 cup unsoaked soybeans = 2½ to 3 cups soaked soybeans = 1¾ cup roasted soybeans.

Turkey

Turkey was common fare on the Lewis and Clark Expedition. Forty-pound turkeys that roamed the wilderness were killed, cleaned and then stuffed with bear fat and wild herbs. The explorers buried the birds beneath hot coals and left them to roast overnight.

While such primitive cooking methods have been abandoned, turkey remains a favorite in Missouri, the nation's fifth largest turkey producer.

Turkey today is available in a variety of forms. Turkey parts make economical sense for small families and those who prefer certain sections. Ground turkey is sold frozen and can be used the same ways ground beef or pork is used. Several types of turkey lunchmeats are available, along with a number of smoked and cured turkey products.

All turkey is federally inspected for wholesomeness, and most is graded. Grade A birds are fully fleshed, meaty and well finished. Birds graded B taste as good as A's but may be slightly less meaty or have skin flaws. Grade B turkeys are seldom grade labeled.

When selecting a whole bird, remember that large turkeys have a greater proportion of meat to bone. Allow ¾ to 1 pound per serving from a bird weighing 12 pounds or less, ½ to ¾ pound per serving when the turkey weighs more than 12 pounds.

Leave frozen, whole birds in their original wrappers to thaw. Three to four days in the refrigerator will thaw a whole turkey. Thawing a bird in a brown paper bag on a tray at room temperature is a faster method; allow one hour per pound. The fastest method is to cover the turkey with cold water, occasionally changing the water to keep it cold; allow ½ hour per pound. Refrigerate or cook turkey as soon as it thaws, because bacteria begins to multiply above refrigerator temperatures.

Cooking times for whole turkeys generally appear on their wrappers. Juicier white meat will result if the bird is roasted breast down for the first half of the roasting period. A tent of foil placed loosely over turkey as it cooks eliminates the need for basting; but remove foil for the last half hour of cooking to brown the skin.

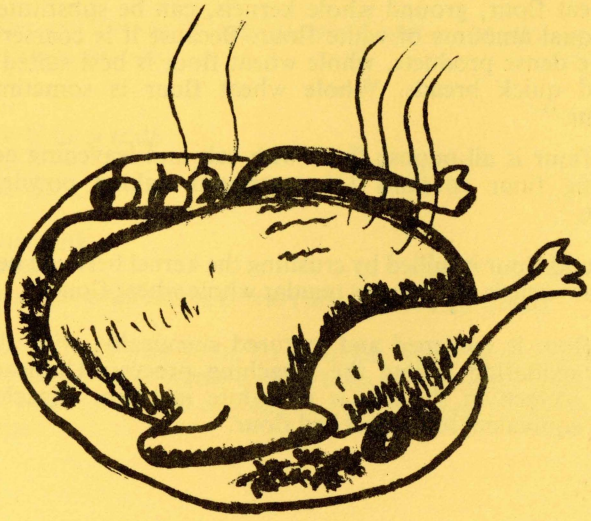
Turkey is naturally low in fat, with only about 176 calories per 3½ ounce serving of white meat, 203 calories per dark meat serving. Turkey not only contains complete protein, it is rich in B-vitamins and iron. It also is a good calcium source.

TURKEY PARMESAN

1 lb. turkey cutlets
1 egg
¼ cup milk
5 tablespoons butter
1 medium onion, chopped
½ cup chopped green pepper
½ teaspoon garlic salt
¼ teaspoon oregano
½ cup fresh mushrooms, sliced
8 oz. tomato sauce
4 oz. tomato puree
flour
½ to ¾ cup grated Parmesan cheese

Season cutlets with salt and pepper to taste. Sprinkle with garlic salt. Beat egg and milk together until blended.

In a large skillet, melt butter over moderate heat. Dip cutlets into egg batter, flour both sides well and fry to golden brown in butter. Remove cutlets from skillet and keep warm. Add oregano, tomato sauce, tomato puree and blend well. Add onion, green pepper, and mushrooms. Return cutlets to skillet mixture, covering the steaks with the mixture. Sprinkle top of cutlets with Parmesan cheese. Turn heat to low and simmer for 20 to 30 minutes. DO NOT OVERCOOK. Serves four.



Wheat

Self-rising pancake flour, or what we know as "pancake mix," was created in St. Joseph, Missouri, and first packaged there in 1889. Four years later, after one of the inventors saw a black-faced comedian in an apron and red bandana perform a tune called "Aunt Jemima," Aunt Jemima pancakes were introduced at the Chicago World's Fair.

Missouri wheat was the primary ingredient in that first pancake flour. Today, while ranking Missouri ninth nationally in wheat production, the 50 to 60 million bushels of wheat grown here each year are found in varying forms in a variety of products.

One pound of wheat contains 14,000 to 17,000 kernels. Each kernel is comprised of three parts: the endosperm, the germ and the bran.

The outermost section, or bran, often is cooked and rolled into flakes for ready-to-eat cereal. Farina comes from the endosperm, and the germ portion often is packaged as "wheat germ." Bulgar is the whole grain boiled, dried and cracked.

When wheat kernels are ground, sifted and purified, flour results. The hard, red winter wheat grown in Missouri makes the best bread flour because of its high protein content. Flour for use in cakes, pastries, crackers and snack foods most often comes from lower protein, soft, red winter wheat. All-purpose flour is a blend of flours ground from the endosperms of soft and hard wheat, so it makes good cakes and pastry as well as good bread.

Whole wheat flour, ground whole kernels, can be substituted in many recipes for equal amounts of white flour. Because it is coarser and yields heavier, more dense products, whole wheat flour is best suited for bread, muffins, and quick breads. Whole wheat flour is sometimes labeled "graham flour."

Self-rising flour is all-pupose flour with salt and leavening added. One cup self-rising flour contains 1½ teaspoons baking powder and ½ teaspoon salt.

Stone-ground flour is milled by crushing the kernel between heavy stones. Its nutritional value is the same as regular whole wheat flour.

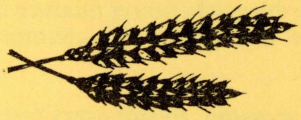
Bleached flour is whitened and matured chemically, with all chemicals removed by oxidation during the bleaching process. Unbleached flour, matured by oxygen in the air, is off-white in color. Bleached flour is nutritionally equivalent to unbleached flour.

Missouri law requires all white flour be enriched with iron and B-vitamins.

Breads and cereals are not "empty" calories. They provide 25% of the energy, 17% of the protein and 25-30% of the iron consumed in our diets.

Flour should be stored in a clean, airtight container, away from heat. Because the oil in the germ in whole wheat flour could become rancid, store whole wheat flour in the refrigerator for up to two months, or in the freezer for three to four months. For best results, be sure flour is at room temperature before baking.

Store bread in a clean, dry, well ventilated place. Refrigerator temperatures retard mold growth on bread but enhance staling. If wrapped securely, bread maintains original flavor, freshness and aroma when stored in the freezer. Freezing old or stale bread will NOT restore freshness.



EASY BRAN MUFFINS

This batter will keep in the refrigerator 2 to 3 weeks. When ready to bake, take out amount needed.

3 cups flour
5 teaspoons baking soda
3 cups sugar
2 teaspoons salt
4 eggs
1 quart buttermilk
1 cup salad oil
one 15-ounce box bran flakes cereal (with raisins, optional)

Sift together flour and soda. In separate, large bowl combine next five ingredients. Stir in flour mixture. Add bran. Fill greased muffin tins ⅔ full. Bake 15-20 minutes at 200 degrees C. (400 degrees F.). Makes 3½ dozen large muffins.

Wine

Grape vine blight and Prohibition ended Missouri's turn-of-the-century distinction as the nation's number two wine producer. Today Missouri grows nearly eight million pounds of grapes annually and is well on the path to regaining national acclaim as a winemaker.

Missouri's 14 wineries rely on more than 20 grape varieties to create their tasty products. Ripe grapes for wine are first de-stemmed and crushed. Those for white wine are pressed immediately, and their juice is separated from the pulp. For red wine, the grapes are left in their skins for several days, then pressed. After one to four weeks of fermentation the thick grape liquid is filtered, clarified and chilled. Dry, red wine then ages for one to three years; sweet, fruity wines are aged a shorter time.

Several Missouri wineries make champagne, or sparkling wine, which is fermented a second time, bottled, and aged on its side for a least one year. The wine is turned daily, or riddled, so that all sediment collects in the bottle necks. After sufficient aging, the necks are frozen, caps popped and sediment removed. Next the dosage (a secret mixture unique to each winery) is added, filling the bottle and giving the champagne its characteristic flavor.

There is a wine for every occasion, to suit every taste. Dry wines generally are preferred for appetizers. Red wines served with dinner are most often dry, rich and sometimes tart, such as Burgundy, Claret or red Chianti. Dinner wines in the white category range from very dry and tart, to sweet and full-bodied. Chablis, Rhine, white Chianti and dry Sauterne are white dinner favorites. Sweet to slightly tart Rose wines also are popular with dinner. The sweetest wines such as Tokay, Muscatel and sweet Sauterne are ideal for dessert. Sparkling wines are suitable for any segment of a meal.

Wine should be stored in a cool, dark place. Warm temperatures damage wine. Store corked wine on its side to keep the cork moist and to keep air out. Capped wines may be stored upright. Serve most white and rose wines chilled, between 7 degrees C (45 degrees F) and 10 degrees C (50 degrees F). Sparkling wines are best even colder. Most appetizer, dessert and red wines are served at a cool room temperature, 16 to 21 degrees C (60 to 70 degrees F)

Also available from many Missouri wineries is grape juice, an unfermented product that contains no alcohol.

About half the grapes grown in Missouri are Concords, and most are sold to a large commercial processor for use in grape juice and jelly.

COMPANY COMPOTE

2 apples, quartered and cored
2 pears, quartered and cored
one 13-ounce can pineapple chunks, drained
1 orange, sliced
¼ cup raisins, optional
¼ teaspoon cinnamon OR 1 cinnamon stick
1/8 teaspoon cloves OR 2 whole cloves
¼ cup water
¼ cup dry white Missouri wine
¾ cup brown sugar

Arrange apples, pears, pineapple, orange slices and raisins in 2-quart casserole.

Add spices. In small bowl, blend water, wine and brown sugar; pour over fruit.

Bake 45 minutes to one hour, covered, at 350 degrees F. Serve warm or cold.

COST FOR A SERVING OF MEAT AT VARIOUS PRICE LEVELS

COST PER POUND	Approximate Cost per Serving							
	1½ Servings per Pound	2 Servings per Pound	2½ Servings per Pound	3 Servings per Pound	3½ Servings per Pound	4 Servings per Pound	5 Servings per Pound	6 Servings per Pound
.59	.39	.30	.24	.20	.17	.15	.12	.10
.69	.46	.35	.28	.23	.20	.17	.14	.12
.79	.53	.40	.32	.26	.23	.20	.16	.13
.89	.59	.45	.36	.30	.25	.22	.18	.15
.99	.66	.50	.40	.33	.28	.25	.20	.17
1.09	.73	.55	.44	.36	.31	.27	.22	.18
1.19	.79	.60	.48	.40	.34	.30	.24	.20
1.29	.86	.65	.52	.43	.37	.32	.26	.22
1.39	.93	.70	.56	.46	.40	.35	.28	.23
1.49	.99	.75	.60	.50	.43	.37	.30	.25
1.59	1.06	.80	.64	.53	.45	.40	.32	.27
1.69	1.13	.85	.68	.56	.48	.42	.34	.28
1.79	1.19	.90	.72	.60	.51	.45	.36	.30
1.89	1.26	.95	.76	.63	.54	.47	.38	.32
1.99	1.33	1.00	.80	.66	.57	.50	.40	.33
2.09	1.39	1.05	.84	.70	.60	.52	.42	.35
2.19	1.46	1.10	.88	.73	.63	.55	.44	.37
2.29	1.53	1.15	.92	.76	.65	.57	.46	.38
2.39	1.59	1.20	.96	.80	.68	.60	.48	.40
2.49	1.66	1.25	1.00	.83	.71	.62	.50	.42
2.59	1.73	1.30	1.04	.86	.74	.65	.52	.43
2.69	1.79	1.35	1.08	.90	.77	.67	.54	.45
2.79	1.86	1.40	1.12	.93	.80	.70	.56	.47
2.89	1.93	1.45	1.16	.96	.82	.72	.58	.48
2.99	1.99	1.50	1.20	1.00	.85	.75	.60	.50

Charts on this page and following page courtesy of National Livestock and Meat Board.

REFRIGERATOR STORAGE TIME

Maximum Storage Recommendations
for Fresh, Cooked, and Processed Meat

Meat	Refrigerator (36° to 40° F.)*
Beef (fresh)	**2 to 4 days**
Veal (fresh)	**2 to 4 days**
Pork (fresh)	**2 to 4 days**
Lamb (fresh)	**2 to 4 days**
Ground beef, veal, and lamb	**1 to 2 days**
Ground pork	**1 to 2 days**
Variety meats	**1 to 2 days**
Luncheon meats	**1 week**
Sausage, fresh pork	**1 week**
Sausage, smoked	**3 to 7 days**
Sausage, dry and semi-dry (unsliced)	**2 to 3 weeks**
Frankfurters	**4 to 5 days**
Bacon	**5 to 7 days**
Smoked ham, whole	**1 week**
Ham slices	**3 to 4 days**
Beef, corned	**1 week**
Leftover cooked meat	**4 to 5 days**

(The range in time reflects storage recommendations from several authorities. Top quality, fresh meat should be used within 2 or 3 days. Ground meat and variety meats should be used within 24 hours.)

FREEZER STORAGE TIME

Maximum Storage Recommendations
for Fresh, Cooked, and Processed Meat

Meat	Freezer (at 0° F. or lower)
Beef (fresh)	**6 to 12 months**
Veal (fresh)	**6 to 9 months**
Pork (fresh)	**3 to 6 months**
Lamb (fresh)	**6 to 9 months**
Ground beef, veal, and lamb	**3 to 4 months**
Ground pork	**1 to 3 months**
Variety meats	**3 to 4 months**
Luncheon meats	**not recommended**
Sausage, fresh pork	**60 days**
Frankfurters	**1 month**
Bacon	**1 month**
Smoked ham, whole	**60 days**
Ham slices	**60 days**
Beef, corned	**2 weeks**
Leftover cooked meat	**2 to 3 months**
Frozen Combination Foods	
Meat pies (cooked)	**3 months**
Swiss steak (cooked)	**3 months**
Stews (cooked)	**3 to 4 months**
Prepared meat dinners	**2 to 6 months**

METRIC TABLES

OVEN TEMPERATURES

Fahrenheit (F)	Celsius (C)
150	65
200	95
250	120
275	135
300	150
325	160
350	180
375	190
400	200
425	220
450	230
500	260

BAKING PAN SIZES

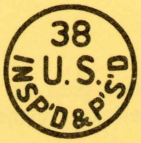
	Metric Volume		Metric Measure in cm. (centimeters)	Closest Size in American System
Cake pans	2	liter	20 x 5	8 x 2
	3.5	liter	33 x 21 x 5	13 x 9 x 2
Loaf pan	2	liter	23 x 13 x 7	9 x 5 x 3
Round layer cake pan	1.2	liter	20 x 4	8 x 1½
Pie pan	750	milliliter	20 x 3	3 x 1¼
Baking dishes	1	liter		1 quart
	2	liter		2 quarts

(same number in liters as in quarts)

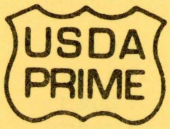
VOLUME MEASURE

teaspoon	5	ml (milliliters)
tablespoon	15	ml
1 fluid ounce	30	l (liter)
Cup	.24	l
Pint	.47	l
Quart	.95	l
Gallon	3.8	l

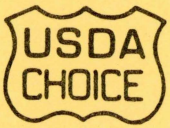
Meat Grading and Inspection



All meat sold commercially in Missouri is federally inspected for wholesomeness. A round emblem in edible, purple vegetable dye is stamped on every carcass that passes inspection. Meat so marked comes from healthy animals which have been slaughtered and processed in sanitary conditions.



highest quality; has most marbling (flecks of fat through flesh) which makes it most tender, juicy and flavorful; most expensive; used primarily by finer restaurants and select meat stores.



most popular grade; leaner than Prime, yet has enough marbling to be juicy and flavorful.

less marbling than Choice; often sold under store brand or house label.

less tender; occasionally seen in retail stores under house label.

While inspection is mandatory, grading is a voluntary service, paid for by meat packers. Most beef, veal and lamb is graded according to USDA standards. Because pork is merchandised differently, federal pork grades are not used. Grade has no effect on nutritional value; lower grade meat is as nutritious as top grade meat.

Plan to get about 3 to 4 servings per pound from lean, boneless cuts; 2 to 3 servings from a pound of meat with some bone; and 3/4 to one serving per pound of meat with a lot of bone.

Missouri Agricultural Products

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